Agenda and Meeting Minutes

Title / Purpose:	MiHIN Technical Workgroup Meeting		
Meeting Date:	Dec 22, 2009	**Facilitator:**	Mike Gagnon
Place:	Conf Call	**Time:**	9:00 AM – 11:00 noon
		Conf Call #:	1-888-394-8197 Passcode: 869479
		Web Link	https://premconf.webex.com/premconf/j.php?ED=102397337&UID=0 Password: mihin-tech2

Topic 1:	**Attendance, Review and Approve Minutes**
Materials:	Meeting Minutes
Presenter:	Mike Gagnon
Topic 2:	**Overview of Standards**
Materials:	HIT Standards Presentation
Presenter:	Mike Gagnon
Topic 3:	**Overview and Discussion of RFI Responses**
Materials:	RFI Report & Presentation
Presenter:	Samer Naser
Topic 4:	**Discussion on Scheduling Vendor Presentations**
Materials:	None
Presenter:	Mike Gagnon
Topic 4:	**Overview of the NHIN Core Infrastructure**
Materials:	NHIN Core Standards Presentation
Presenter:	Mike Gagnon
Topic 5:	**Begin Review of Technical Architecture Development Process**
Materials:	Technical Architectrure Draft
Presenter:	Mike Gagnon

DISCUSSION	**Topic 1:**

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
1.		
2.		
3.		
4.		

DISCUSSION	**Topic 2:**		
ACTION ITEMS		**PERSON RESPONSIBLE**	**DEADLINE**
DISCUSSION	**Topic 3:**		
ACTION ITEMS		**PERSON RESPONSIBLE**	**DEADLINE**
DISCUSSION	**Topic 4:**		
ACTION ITEMS		**PERSON RESPONSIBLE**	**DEADLINE**

Agenda and Meeting Minutes

Title / Purpose:	MiHIN Second Technical Workgroup Meeting		
Meeting Date:	Dec 22, 2009	**Facilitator:**	Mike Gagnon
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Materials:	RFI Report & Presentation
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Materials:	None
Presenter:	Mike Gagnon
Topic 5:	**Overview of the NHIN Core Infrastructure**
Materials:	NHIN Core Standards Presentation
Presenter:	Mike Gagnon
Topic 6:	**Begin Review of Technical Architecture Development Process**
Materials:	Technical Architectrure Draft
Presenter:	Mike Gagnon

DISCUSSION	**Topic 1: Attendance, Review and Approve Minutes**

Co-chair Ken Theis opened the meeting and took a 'roll call' of voting members. All voting members were present.

Ken reminded the workgroup members to identify themselves by their name and email address when logging into the web-ex session. This is to help the MiHIN PCO keep complete and accurate records of the Technical Workgroup sessions. If you have not identified yourself the project coordinator will ask you to do so during the session. If you still do not identify yourself, the project coordinator will drop your connection.

Meeting minutes for the first Technical Workgroup meeting were posted to the Technical Workgroup workspace on Workzone and will be approved at the next meeting.

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
1. Post first meeting minutes	Sharon McLear	December 22, 2009
2. Review meeting minutes	Technical Workgroup	January 5, 2010

DISCUSSION	Topic 2: Overview of Standards
Mike Gagnon presented an overview of HIT Standards. The presentation explained what the standards are and how the constructs for components, transactions, and transaction packages roll-up and fit together as messages or documents.	
Implementation of standards in the MiHIN will begin with use cases defined by the Business Operations Workgroup (and some defined the Technical Workgroup). The business requirements for the use cases are converted into messages or documents as appropriate. The messages and documents have associated constructs and interoperability specifications. For example, an 'NAV transaction package' is how you identify to the RLS that you have a new document available to the MiHIN. For lab results reporting, C32 would be the component level.	
When different or 'competing' sets of standards are developed for the same component or transaction, HITSP will pick the one that will become the HITSP standard.	
Mike noted that our intent with the MiHIN backbone was to stay as close as possible to the HITSP standards. We might have to veer from that at times for practical reasons.	
HITSP enforces a harmonization process to adopt new standards or update/revise existing ones.	
Mike listed the HITSP standards currently implemented and being used today. Some of standards adopted and/or revised by the HITSP harmonization process are ahead of where vendors are currently in terms of implementation and use.	

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
none		

DISCUSSION	Topic 3: Overview and Discussion of RFI Responses
Samer Naser presented a high level overview of the responses to a MiHIN Infrastructure Backbone RFI the MiHIN PCO distributed last October.	
Samer presented the categories used to summarize the vendors and their responses and identified the products and partners proposed in each one.	
The responding vendors are categorized (by the MiHIN PCO) into one of eight categories. This was presented on the final slide. Samer explained the categories and the fact that some vendors fall somewhere in between. All vendors on the final slide had something to offer for in terms of constructing a MiHIN infrastructure backbone	
Vendors where the RFI response was outside the perimeter of what the MiHIN PCO was asking for (in terms of constructing an infrastructure backbone) were categorized separately from what was presented on the final slide. If these vendors can provide additional information their categorization will be re-evaluated. Some in the HIE category have come almost far enough along to be considered an backbone infrastructure vendor	
Mike was asked about the 'bottom-up' approach used in New York. There are many ways to go about this (Axolotl example). We are focusing on the backbone to start mostly due to the available funding.	
Rick Warren commented that everyone on the call might be concerned about sustainability and cost. Mike answered the comment with the fact the when we focus on the *operational plan* we will have to know certain things about finance, business operations and governance. Ken added that there are many points of integration for the workgroups working on those items in the project plan.	
Dan Stross noted that we could go down the classic path of building something that is not used. Doug expressed concern about the ability of the community HIEs to grow organically. Mike made a suggestion for a hybrid approach and asked for feedback from the group. The hybrid would combine 'build it and they will come' with a pilot to prove out the functionality, maybe with two different HIEs.	

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
Feedback from the group on a hybrid approach.	Technical Workgroup members	

DISCUSSION	Topic 4: Discussion on Scheduling Vendor Presentations
All vendors being considered have come to where they are at from different beginnings and different philosophies. He would like to schedule presentations from as many vendors as is needed and as is practical.	
Ernie suggested starting with one presentation from each category, 6 in all.	
The presentations would be for voting members only. Voting member participation is encouraged, but not mandatory.	

Ken motioned and Rick seconded the motion. A vote followed and the motion for one vendor presentation per vendor category was accepted.	

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
Pick 6 vendors who represent the technical solutions that the team needs to review.	PCO Team	12/31/09

DISCUSSION	**Topic 5: Overview of the NHIN Core Infrastructure**

NHIN Core Services provides standards that anyone can use to create a compatible infrastructure backbone.

For example, Subject Discovery is a core service for looking up a patient and there are several standards around it. Query for documents is a service for finding the documents that relate to that patient and then how to retrieve those documents.

There are also security items like the query audit log, consumer audit log. There is the messaging platform (how the messages are moved around and the NHIN service registry that determines what/who are all the services 'out there' and which ones the MiHIN will hook up to.

CONNECT Open Source is in various stages of being implemented. Mike asked the workgroup to list the ones they know.

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
List the various stages of CONNECT Open Source being implemented that you know of.	Technical Workgroup members	

DISCUSSION	**Topic 6: Begin Review of Technical Architecture Development Process**

Query Audit log might have the ability for patients to query.

CONNECT includes adaptors, adaptors can connect to the Gateway, and the Gateway opens the way to multiple foreign backbones (as with other states such as Michigan).

Data transforms and terminology services are not part of CONNECT.

Scot Ellsworth noted that he can provide materials from a seminar where Initiate presented services incorporated with an MPI.

The MiHIN infrastructure backbone depends on web service specifications. Our end goal is to be prepared to write specifications to implement the backbone.

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE

DISCUSSION	**Public Comment**

Jeff Hawley commented that during the vendor presentations, what would be the intellectual property protection offered to the vendors. The answer was that these sessions would only be open to voting members.

Jeff added that Accenture could offer an educational session on standards if that would be of value to the workgroup.

The team asked for meeting materials to be posted sooner and asked if there was other reference material they could review. Mike said a 'Reference Materials' section would be added to WorkZone for that purpose.

Attendance list

- Rich Boehm — Member
- George Boersma — MiHIN PCO
- Gerry Branch — General Public
- Nathan Bunker — General Public
- Don Carne — member
- Lee Castigilioni — Member
- Marcus Cheatman — Member
- Doug Dietzman — Voting Member
- Chuck Dougherty — Member
- Scot Ellsworth — MiHIN PCO
- Doug Fenbert — Voting Member

- John Golding — Gneral Public
- Jeff Hawley — Member
- Troy Lane — Member
- Thomas Lauzon — Voting Member
- Sharon Leenhouts — Member
- Mark Miller — Member
- Paul G. Miller — Voting Member
- Robert Moerland — Member
- Deb Mosher — Member
- Paul Muneo — Member
- Amber Murphy — MiHIN PCO - Dewpoint
- Samer Naser — MiHIN PCO – Dewpoint
- Ed Novoli — Member
- Nancy Page — General Public
- Jennifer Pietras — Member
- Laura Rappeleye — MiHIN PCO
- Bill Riley — Voting Member
- Randall Rothfuss — State of Michigan - DCH
- Kevin Sackett — Member
- Dan Stross — Voting Member
- Steve Summers — Member
- Mick Talley — Member
- Ken Theis — Co-Chair
- Mark Tuthil — Voting Member
- Rick Warren — Co-Chair
- Bruce Wiegand — Voting Member
- Ernie Yoder — Voting Member

HIT Standards

MiHIN Technical Workgroup

December 22, 2009

AGENDA

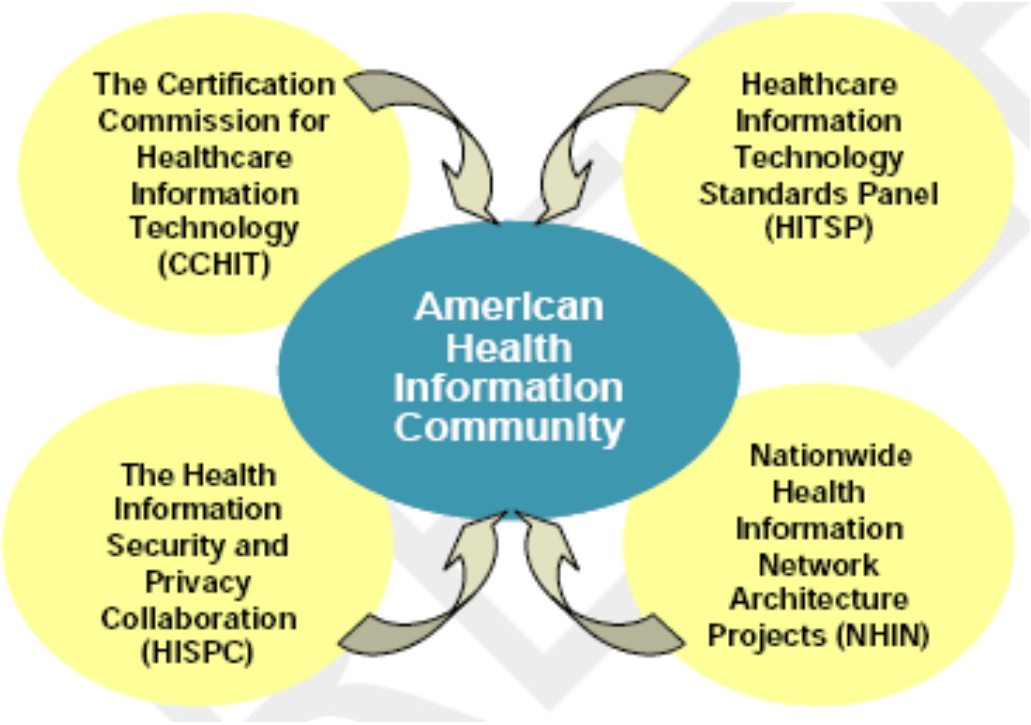
- National eHealth Collaborative
- HITSP Interoperability Specifications

National eHealth Collaborative

A federal advisory board chartered in 2005 to make recommendations on how to accelerate the development and adoption of HIT.

ONC contracts

- HITSP: Identify Interoperability Standards to facilitate exchange of patient data
- CCHIT: Define a process for certifying standards compliance
- HITSP: Standards-based security framework to protect patient privacy and confidentiality
- NHIN: develop a series of prototypes



HITSP Principles

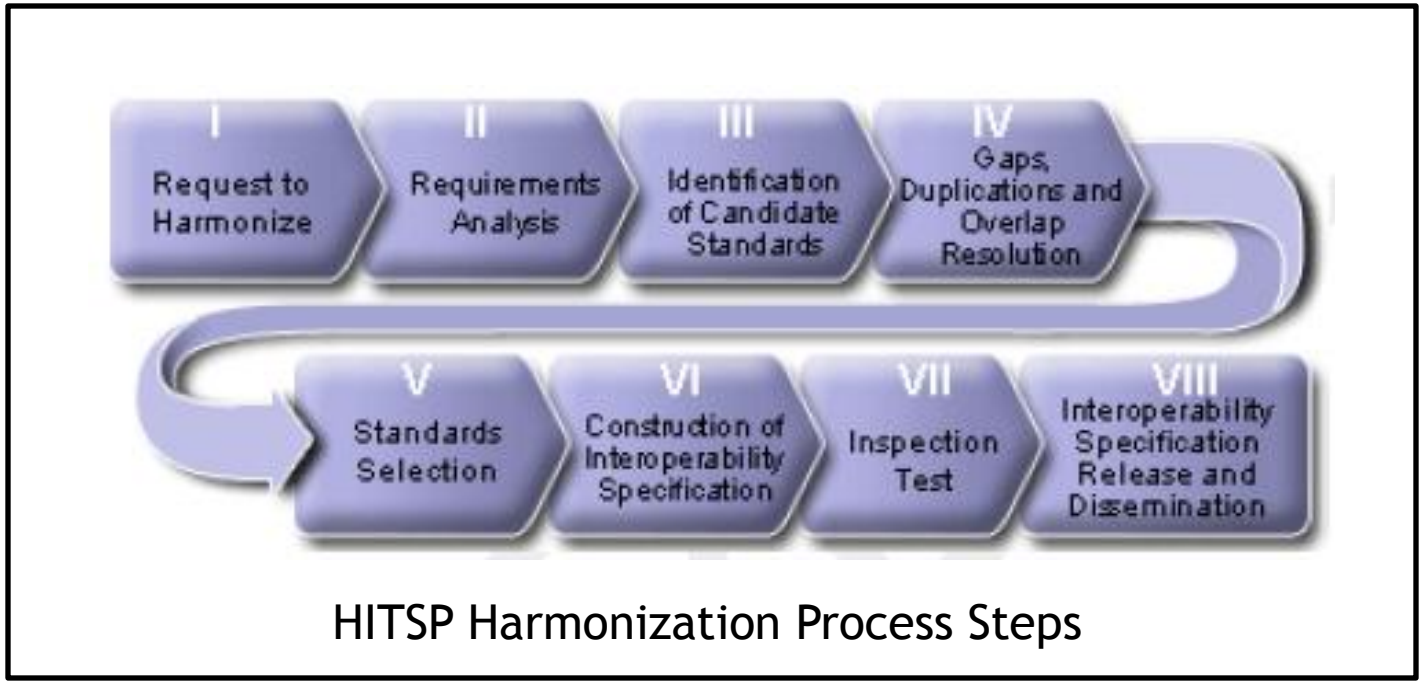
- Interoperability (not Functional) Specifications
  - Business and Technical Actors
  - Describe *Transactions* between Actors
    - Message Standards
    - Content Standards
    - Terminology Standards
- Architectural Neutrality
  - Driven by *Business Requirements* expressed as Use Cases
- Use Messages and/or Documents as Appropriate
  - *Messages*: Non-persistent encapsulations of highly structured data that require external context
  - *Documents*: Persistent encapsulations of data and context that may be authenticated to ensure nonrepudiation

HITSP Standards Artifacts

- Specifications
- Implementation Guides
- Code Sets
- Terminologies
- Integration Profiles

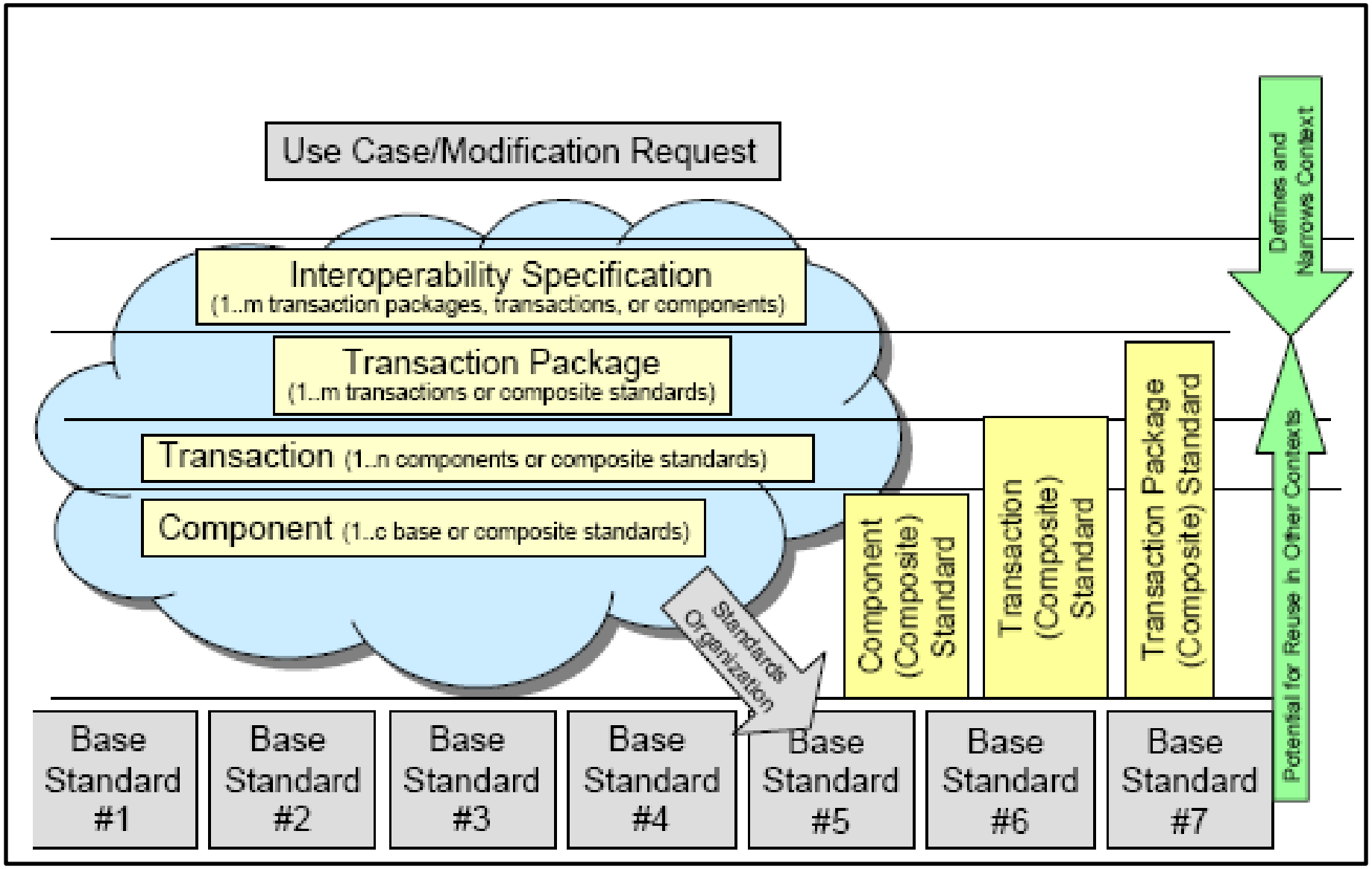
HITSP Use Cases

- Defines business and functional requirements
- Identified by NeHC
- HITSP Technical Committees harmonize standards



HITSP Harmonization Process Steps

HITSP FRAMEWORK



CONSTRUCTS

- Interoperability Specification (IS)
  - Models business, functional, interoperability requirements to meet Use Case
  - Identifies technical system requirements to meet Use Case
  - Suite of constructs that define how to integrate and constrain existing standards and specifications to satisfy Use Cases
  - Defines context(s) for additional constraints by grouping actions and actors for use of other HITSP constructs

CONSTRUCTS

- Transaction Packages (TP)
  - Logical group of transactions
  - Defines how HITSP constructs are used to support a standalone information interchange within a defined context
- Transactions (T)
  - Logical group of actions that must succeed or fail as a group
  - Use components and/or composite standards to realize the actions, including necessary content , context and constraints
- Components (C)
  - Groups and constrains base standards that work together, such as message and terminology standards
  - Typically one ‘primary’ standard and several ‘secondary’ standards; an atomic construct to support interchange

Base Specifications Examples

- Message Standards
  - HL7 2.x
    - Example: HL7 A08 Update Patient Information
  - HL7 Continuity of Care Document (CCD)
    - Example: CCD C32 Summary Document
  - HL7 v3.0 Clinical Document Architecture
  - IHE Technical Frameworks
    - Example: PIX Patient Id Cross Reference
- Terminology Standards
  - Labs: Logical Observations Identifiers and Numeric Codes (LOINC)
  - Medications: RxNorm
  - Other clinical terms: Systematized Nomenclature of Medicine (SNOMED-CT)

HITSP Interoperability Specifications (IS)

IS#	Name	Version
IS01	EHR Lab Reporting	2.1
IS02	Harmonized Biosurveillance Lab Use Case	2.1
IS03	Consumer Empowerment and Access to Clinical Info via Networks	4.0
IS04	Emergency Responder EHR	2.0
IS05	Consumer Empowerment and Access to Clinical Information via Media	2.0
IS06	Quality	1.1.1
IS07	Medication Management	1.0
IS08	Personalized Healthcare	1.0
IS09	Consultations andTransfers of Care	1.0
IS10	Immunizations and Response Management	1.0
IS11	Public Health Case Reporting	1.0
IS12	Patient - Provider Secure Messaging	1.0
IS77	Remote Monitoring	1.0

HITSP Transaction Packages (by Specification)

HITSP Transaction Packages

		IS01	IS02	IS03	IS04	IS05	IS06	IS07	IS08	IS09	IS10	IS11	IS12	IS77
TP13	Manage Sharing of Docs	■	■	■	■			■	■	■	■	■		■
TP14	Send Lab Result Message	■												
TP20	Access Control			■	■	■		■	■	■	■	■	■	■
TP21	Query for Existing Data										■	■		
TP22	Patient ID Cross-Referencing	■	■	■				■	■	■	■	■	■	■
TP30	Manage Consent Directives			■	■		■	■	■	■	■	■	■	■
TP43	Medication Orders							■						
TP46	Medication Formulary and Benefits Information							■						■
TP49	Sharing Radiology Results		■											
TP50	Retrieve Form for Data Capture		■				■					■		
TP89	Sharing Imaging Results								■	■				

HITSP Transactions (by Specification)

	HITSP Transaction	IS01	IS02	IS03	IS04	IS05	IS06	IS07	IS08	IS09	IS10	IS11	IS12	IS77
T14	Send Lab Result Message								■	■		■		
T15	Collect and Communicate Security Audit Trail			■	■	■		■	■	■	■	■	■	■
T16	Consistent Time			■	■	■		■	■	■	■	■	■	■
T17	Secured Communication Channel			■	■	■	■	■	■	■	■	■	■	■
T18	View Lab Results From Web App	■												
T23	Patient Demographics	■		■	■			■	■	■	■	■	■	■
T24	Pseudonymize		■				■				■			
T29	Notification of Document	■	■						■	■	■	■		
T31	Document Reliable Interchange								■	■	■	■	■	■
T33	Transfer of Documents on Media					■			■	■	■	■		
T40	Patient Health Plan Eligibility Verification				■			■	■	■				■
T42	Medication Dispensing Status							■						
T63	Emergency Message Distribution Element Transaction				■						■	■		
T64	Identify Communication Recipients				■				■	■	■	■		
T66	Retrieve Value Set				■				■	■	■	■		
T67	Clinical Referral Request Transport Transaction				■					■				
T68	Patient Health Plan Authorization Request and Response				■				■	■				■
T79	Pharmacy-Health Plan Authorization Request/Response									■				■
T81	Retrieval of Medical Knowledge			■		■			■		■	■		
T85	Administrative Transport to Health Plan				■				■	■				■

HITSP Components (by Specification)

	HITSP Component	IS01	IS02	IS03	IS04	IS05	IS06	IS07	IS08	IS09	IS10	IS11	IS12	IS77
C19	Entity Identity Assertion			■	■			■	■	■	■	■	■	■
C25	Anonymize		■				■							
C26	Nonrepudiation of Origin			■			■				■	■		
C28	Emergency Care Summary Document				■		■							
C32	Summary Documents Using CCD			■	■	■		■	■	■		■		
C34	Patient Level Quality Data Message						■							
C35	Lab Result Terminology	■	■	■		■				■		■		
C36	Lab Result Message								■	■		■		
C37	Lab Report Document	■	■	■	■	■			■	■		■		
C39	Encounter Message		■		■									
C41	Radiology Result Message		■							■				
C44	Secure Web Connection	■												
C47	Resource Utilization				■									
C48	Encounter Document		■		■				■	■		■		
C62	Unstructured Document			■	■	■			■	■	■	■	■	
C70	Immunization Query and Response Component										■			
C72	Immunization Message										■			
C74	Remote Monitoring Observation Document						■			■				■
C75	Healthcare Associated Infection Report						■					■		
C76	Case Report Pre-Populate						■					■		
C78	Immunization Document						■			■	■			
C80	Clinical Document and Message Terminology						■		■		■	■		■
C82	Emergency Common Alerting Protocol Component				■						■	■		
C83	CDA Content Modules						■				■	■		■
C84	Consult and History and Physical Note				■		■		■	■				
C87	Anonymize Public Health Case Reporting Data											■		
C88	Anonymize Immunizations and Response Mgmt							■			■			
C90	Clinical Genomic Decision Support								■					
C105	Patient Level Quality Data Document						■							
C106	Measurement Criteria Component						■							

Survey of RFI Results

List of Vendors Who Responded to RFI

Vendor	Vendor's partners, subcontractors or collaborators	Product
Accenture	Orion, Initiate, HealthVision, Oracle	Accenture NHIN Solution
Accenx	Initiate	Accenx Exchange, Initiate Master Data Service, Initiate Patient, Initiate Provider, Initiate XDS.b Registry
Axolotl	None	Elysium Exchange
CapGemini	Option 1: Sun JavaCAPS, Initiate, Oracle & Orion; Option 2: Wellogic	
CarahSoft	Combination of Red Hat and Axial	Axial and JBOSS and Connect Open Source
CGI	No response	
CNSI	SUN Microsystems, Fairchild Consulting	eCAMS, RuleIT, Sun's JCAPS, HealthLanguage's Language Engine (LE) product

List of Vendors Who Responded to RFI, continued

Compuware	Through the Covisint subsidiary	Covisint: Statewide Health Exchange, "AppCloud"
CSC	MedPlus, Intersystems	MedPlus Centergy & Care 360, Intersystems Ensemble
dbMotion	Initiate	dbMotion 3.03
Harris	Initiate, Health Language Inc.	NHIN Connect (Open Source) V2.2
HP	EDS which is now called HP Enterprise Services.	HP Enterprise Care Network Services Framework (CNS)?
IBM	Apelon	HIE Service Provider (HSP) Solution
Initiate	None listed. Listed, however, as the MDM component on several of the other RFI responses.	Initiate Master Data Service, Initiate Patient, Initiate Provider, Initiate XDS.b Registry

List of Vendors Who Responded to RFI, continued

Maximus	Intel, Initiate	Intel SOA Expressway for Health (SOAEH), Initiate MPI, Apelon for terminology services
Medicity		Medicity Novo Grid, ProAccess Clinical Suite, MediTrust Clinical Interoperability Platform
MessageWay		MessageWay
Microsoft		Amalga Unified Intelligence System (UIS) 2009 V2.0
NextGate		MatchMetrix, WatchMetrix, NHIN Connect, Project KENAI HIEOS
Orion	Initiate, Oracle	• Concerto™ Clinical Portal and Clinical Suite v6.6 • Rhapsody™ Integration Engine v3.3 • Initiate Master Data Service Platform (EMPI) • Oracle Health Transaction Base (HTB)
Patient Central	Wellcentive	MyHealthArchive, Wellcentive Registry, Connect and Gateway

List of Vendors Who Responded to RFI, continued

PDSG		Crossflo DataExchange (CDX)
Rolta	Oracle Health Sciences Global Business Unit, TecSec	Oracle Healthcare Transaction Base (HTB), TekSec Constructive Key Management (CKM) security technology and products
Setecs		Setecs Mix
Shared Health		Shared Health Clinical Xchange
Sun		Java Composite Application Platform Suite (JCAPS)
Symantec	None	Several Symantec products.
Thomson Reuters	CareEvolution	Thomson Reuters HIE Advantage, CareEvolution HIEBus - Health Information Exchange BUS
Unisys	None listed.	None listed.
Verizon	ANXeBusiness	Mainly network Hardware, Application-Integrator

General Classification of Vendors

Category	Vendors
System Integrator	Accenture, CapGemini, CNSI, CSC, Maximus
HIE Vendor	Accenx, dbMotion, Medicity, Microsoft, Orion, Setecs, Thomson Reuters
Backbone Vendor	Sun, Intel (Maximus), Intersystems (CSC)
HIE/Backbone Vendor	Axolotl, Compuware (Covisint), IBM,
Functioning HIE	Shared Health
NHIN Connect System Integrator	CarahSoft, Harris, NextGate
Component	Initiate, Symantec
Marginal	CGI, HP, MessageWay, Patient Central, PDSG, Rolta, Unisys, Verizon

NHIN Core Standards

MiHIN Technical Workgroup

December 22, 2009

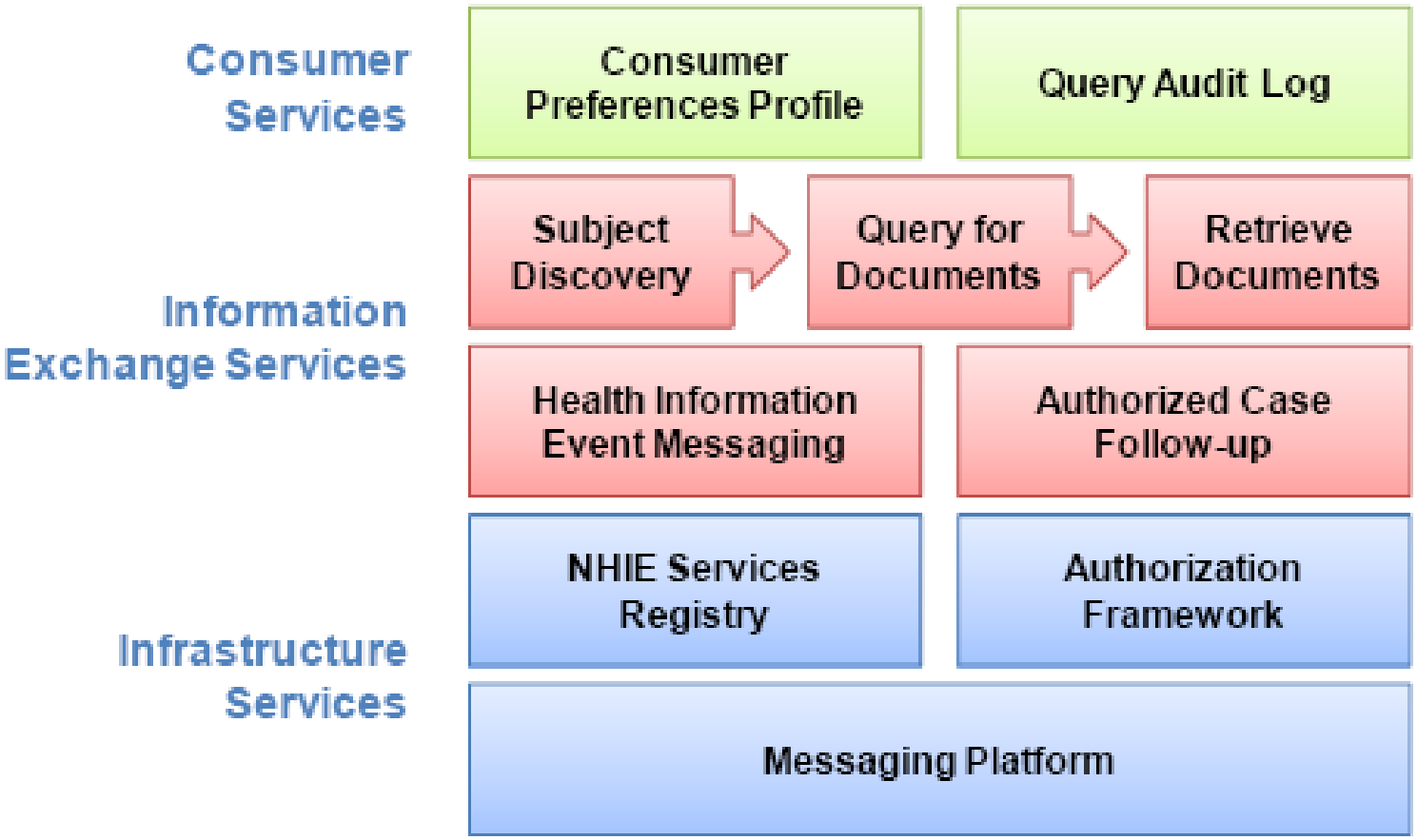
AGENDA

- NHIN Core Services
- ConnectOpenSource Architecture
- Web Service Standards

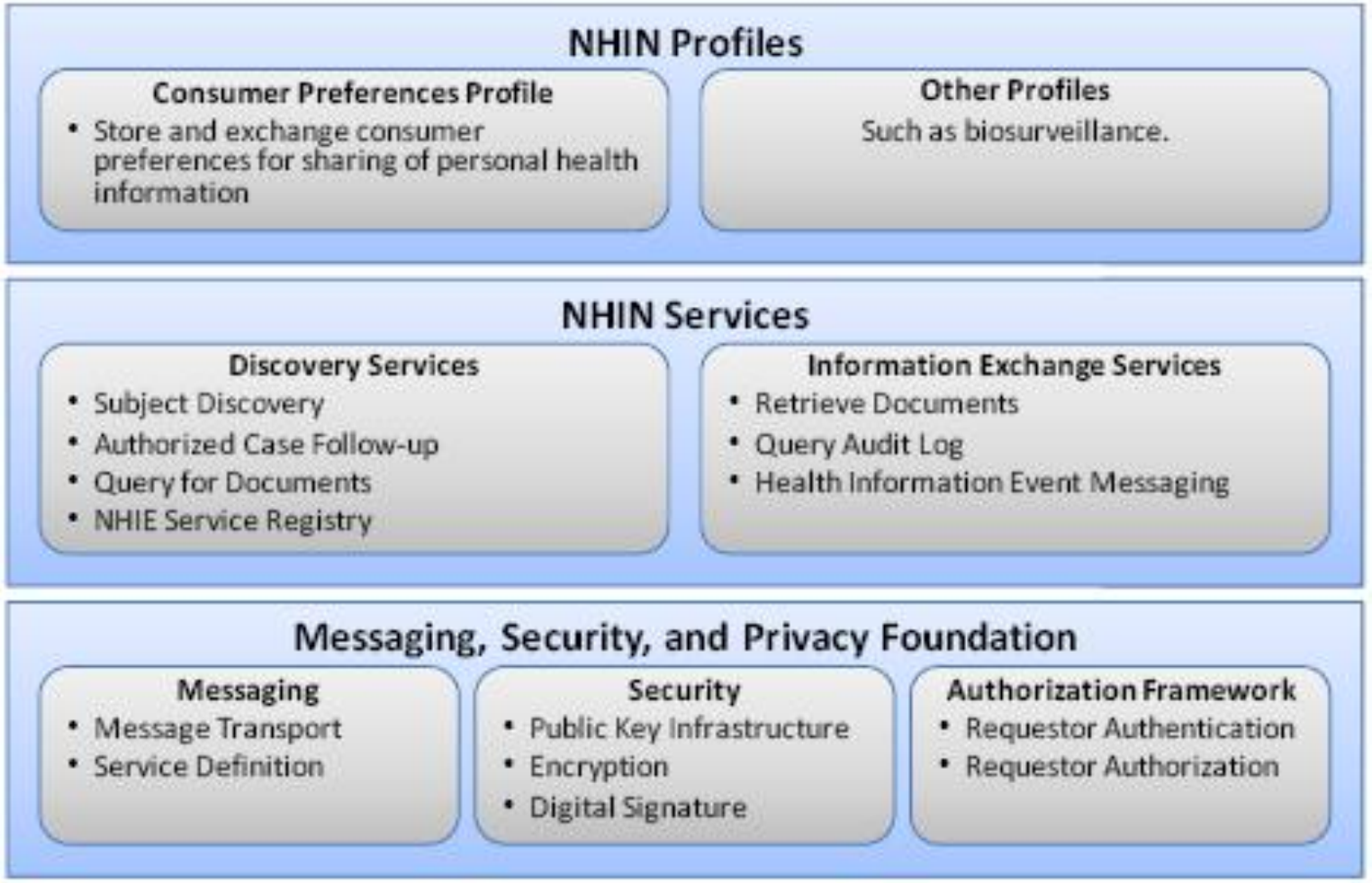
NHIN Core Services

- Subject Discovery (patient inquiry)
- Query for Documents
- Retrieve Documents
- Query Audit Log
- Authorization Framework
- Consumer Preferences Profile
- Messaging Platform
- Authorized Case Follow-up
- Health Information Event Messaging
- NHIE Service Registry

NHIN Core Services



CONNECTOPENSOURCE ARCHITECTURE



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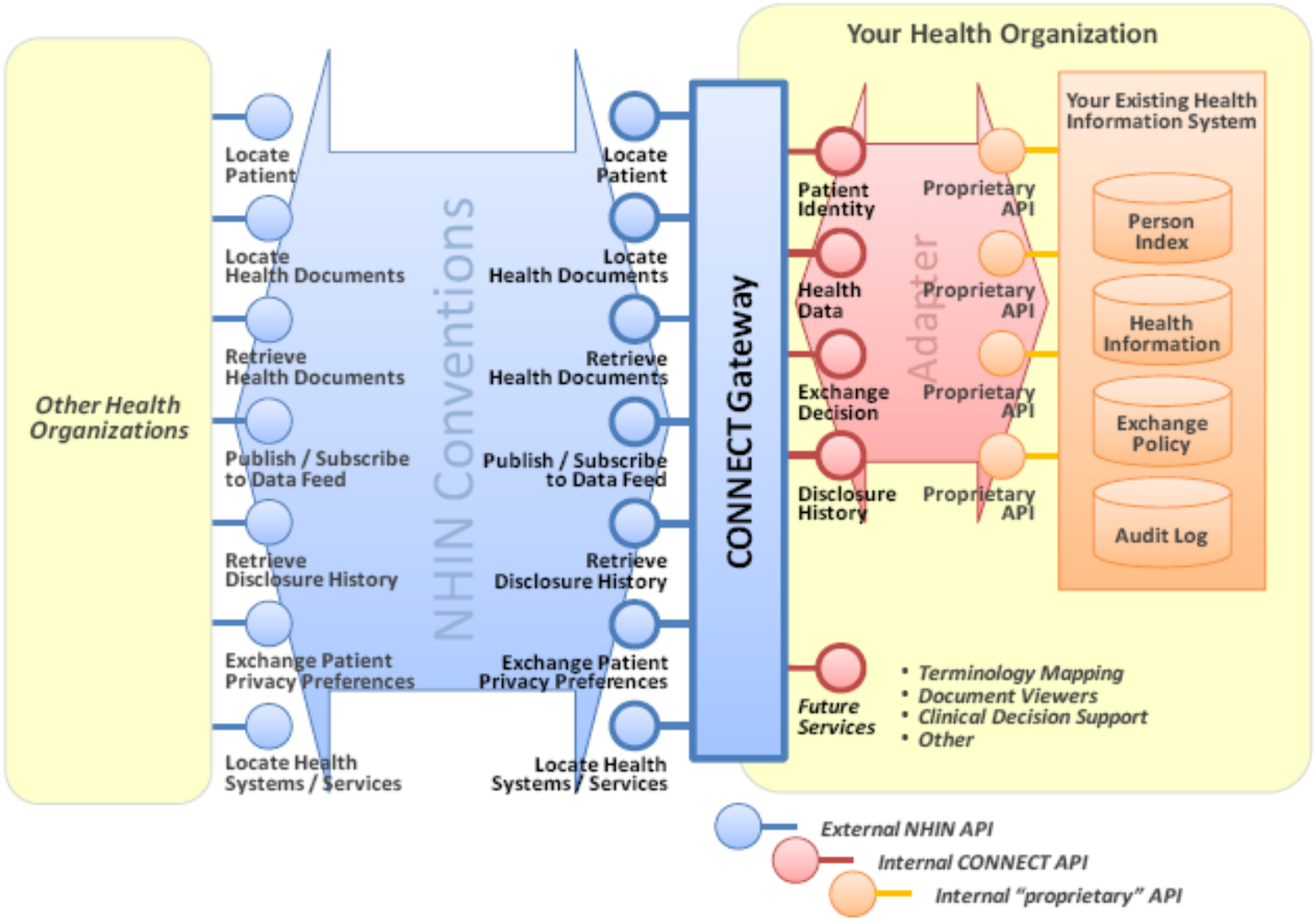

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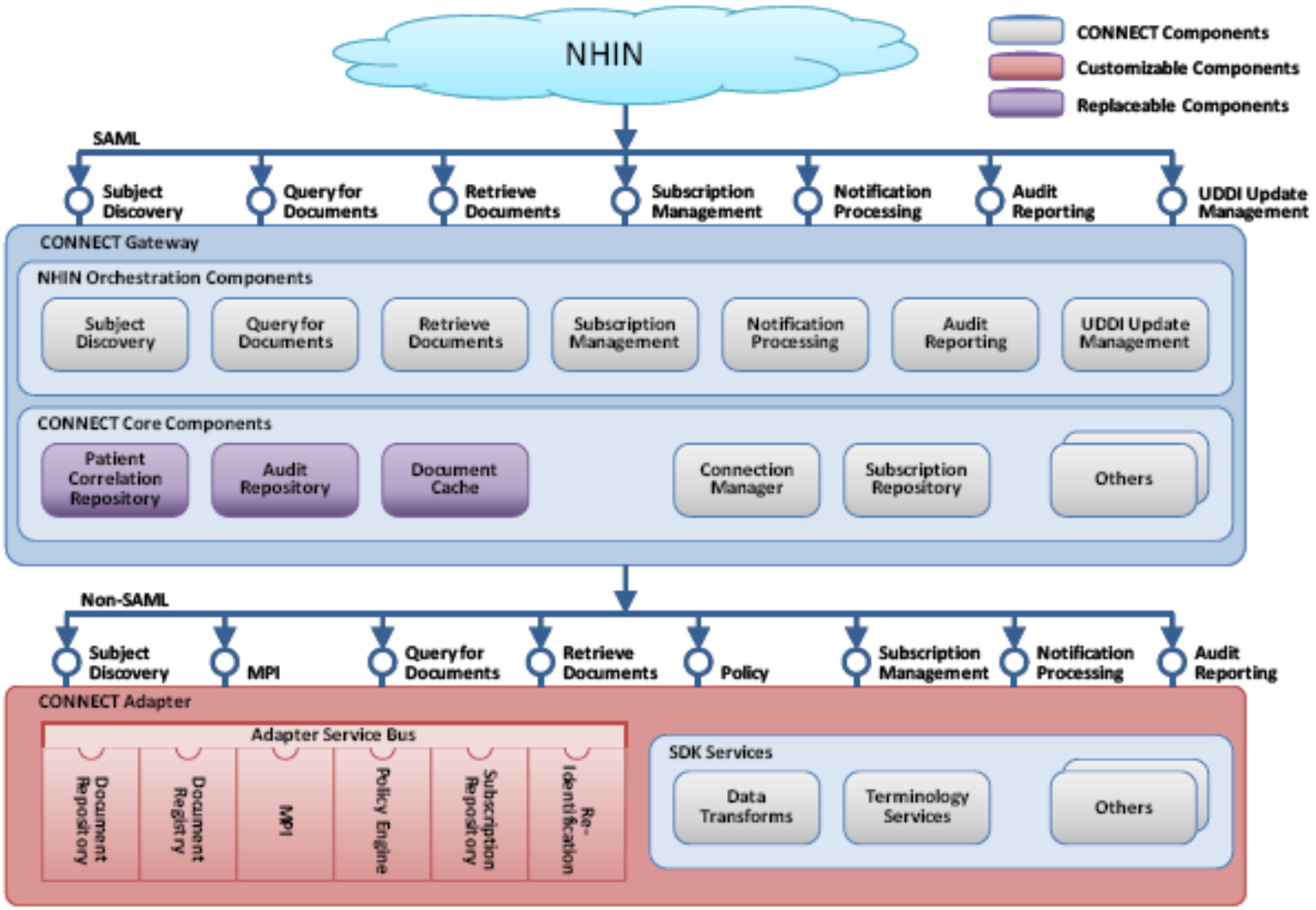
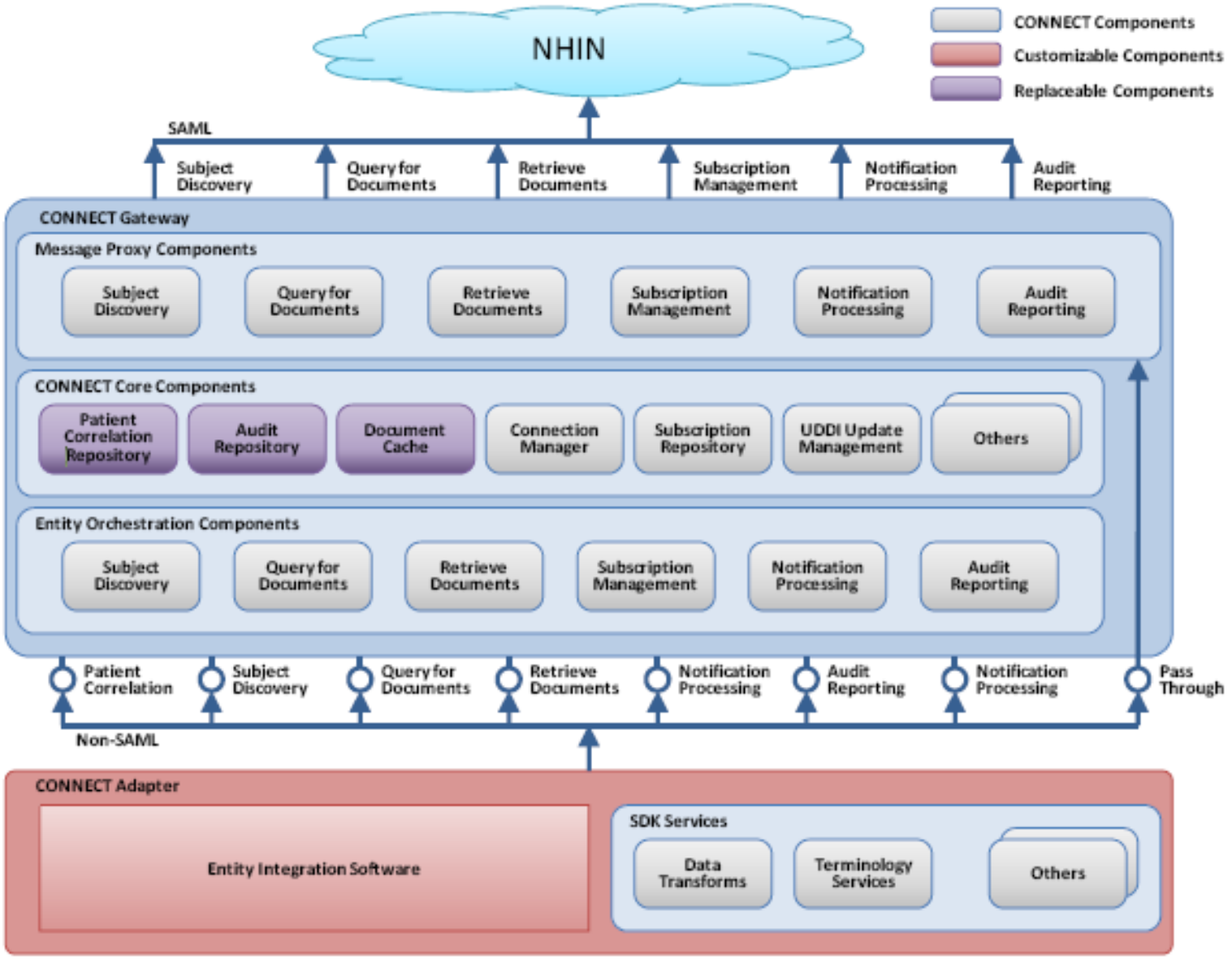


CONNECTOPENSOURCE ARCHITECTURE



Web Service Specifications

- Messaging
  - SOAP, WS-ReliableMessaging
  - WS-Notification, WS-BaseNotification, WS-Topics
- Metadata Exchange
  - WSDL , UDDI, WS-Policy
- Transaction
  - WS-Transaction, WS-BusinessActivity, WS-Coordination
- Security
  - SAML, XACML, XML Signature/Encryption, WS-Security
- Business Process
  - WS-BPEL, WS-Choreography

Key Web Service Protocols

- SOAP – most commonly used in HIT/HIE
  - Alternative: Representational State Transfer (REST)
- Universal Description, Discovery and Integration (UDDI) – service discovery
  - Alternative: ebXML
- Web Services Description Language (WSDL)
- Business Process Execution Language (BPEL)

MiHIN HIE-Backbone Interoperability

Messaging Gateway
User/Provider Index
Query for Documents Service
Security Services
MiHIN Backbone
EMPI/RLS
XDS.b Query/ Response
NAV
SAML Assertion
User Updates
Patient Identity Feed (PIX)
Patient Id Lookup (PIX)
Patient Data Query (PDQ)
Lab Orders & Results
Query for Documents Service
XDS Repository
Patient Identity Service
Security Services
MiHIN Connectivity
CCD C32, C36, C37
Document Query/Response
EMPI/ RLS
User/Provider Index
Authenticate User
Typical Community HIE
Messaging Gateway
Clinical Data
Lookup Patient
Request Patient Data
Clinical Portal
Portal Users
Virtual Edge Server
Virtual Edge Server
Edge Server
Edge Server
Edge Server
Patient Demographics & Clinical Data
Patient Demographics & Clinical Data
Patient Demographics & Clinical Data
Patient Demographics & Clinical Data
Patient Demographics & Clinical Data
Local Protocols
Hospital
Hospital
Other Community Providers
Physician Offices
Physician Offices